



# UNITED STATES PATENT AND TRADEMARK OFFICE

*in*  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/588,628

06/07/2000

Kazutaka Shibata

ROH-023

8757

7590

05/17/2004

Mr. STEVEN M. RABIN  
c/o RABIN & BERDO, P.C.  
1101 14th STREET, NW  
WASHINGTON, DC 20005

EXAMINER

HA, NATHAN W.

ART UNIT

PAPER NUMBER

2814

DATE MAILED: 05/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application N

09/588,628

Examiner

Nathan W. Ha

Applicant(s)

SHIBATA, KAZUTAKA

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,2,7,8 and 21-23 is/are pending in the application.
- 4a) Of the above claim(s) 1,2,8 and 23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election with traverse of claims 21 and 22 in Paper No. 3/04 is acknowledged. The traversal is on the ground(s) that the search of an entire application can be made without serious burden, the examiner must examine it on the merits. This is not found persuasive because the application contains two distinct inventions, for example, one embodiment describes a single chip on a substrate, and another embodiment describes a stack chip device. They are obviously distinct inventions. By status, "[i]f two or more independent and distinct inventions are claimed in one application, the Commissioner may require the application to be restricted to one of the inventions." 35 U.S.C. 121.

The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 2814

3. Claims 21 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Hsuan et al. (US 6,239,366, newly cited, hereinafter, Hsuan.)

In regard to claim 21, in fig. 5C or 3C, Hsuan discloses a semiconductor device, comprising:

a board 90 having a mounting surface and an opposite surface. See col. 5, lines 40-45;

first semiconductor chip 66 mounted on the mounting surface of the board, the first semiconductor chip having an active surface and an inactive surface disposed opposite the active surface, the first semiconductor chip being joined to the board in a state where the inactive surface thereof is facing to the board;

a second semiconductor chip 58 having an active surface and an inactive surface disposed opposite the active surface, the second semiconductor chip being joined to the first semiconductor chip in a state where the active surface of the second semiconductor chip is facing to the active surface of the first semiconductor chip; bonding wires 94 connecting the active surface of the first semiconductor chip and the mounting surface of the board;

a protective resin 74 and 76 permanently joined to the mounting surface of the board, covering the bonding wires and sidewalls of the first and second semiconductor chips with the inactive surface of the second semiconductor chip exposed to the outside of the protective resin, the protective resin having a surface formed so as to be flush with the inactive surface of the second semiconductor chip.

In regard to claim 22, Hsuan further discloses wherein the protective resin has a side surface formed so as to be flush with a side surface of the board along a plane perpendicular to the mounting surface of the board, for example, see fig. 3B, wherein resin 74 is flush with the board 50.

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 21 and 22 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

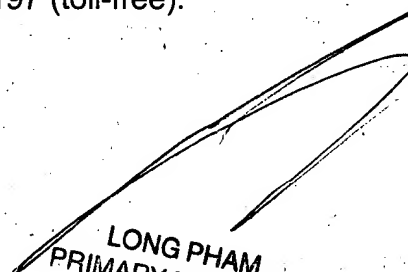
Art Unit: 2814

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan W. Ha whose telephone number is (571) 272-1707. The examiner can normally be reached on M-TH 8:00-7:00(EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nathan Ha  
May 11, 2004



LONG PHAM  
PRIMARY EXAMINER